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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521.312	01/14/2005	Satoru Tanaka	Q85242	1741

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EXAMINER

MARTINEZ, JOSEPH P

ART UNIT	PAPER NUMBER
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2873

DATE MAILED: 08/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/521,312

Applicant(s)

TANAKA ET AL.

Examiner

Joseph P. Martinez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1-14-05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claim 1 is rejected under 35 U.S.C. 102(b) as being fully anticipated by Silverbrook et al. (5805136).

Re claim 1, Silverbrook teaches for example in fig. 16, a spatial light modulator (63) for use in hologram recording (wherein the office interprets "for use in hologram

recording” to be intended use and it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations), in which a plurality of light modulation elements are arranged in one plane (55-60), wherein: said plurality of light modulation elements are arranged such that there are at least two periods of periodic structure corresponding to an arrangement of the light modulation elements in an arbitrary direction in said plane (fig. 16).

2. Claims 2 and 3 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Leib et al. (5107351).

Re claim 2, Leib et al. teaches for example in fig. 10, a spatial light modulator (111) for use in hologram recording (wherein the office interprets “for use in hologram recording” to be intended use and it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations), in which a plurality of light modulation elements (111) are arranged in a light modulation region of a circular shape (col. 8, ln. 23), wherein: said plurality of light modulation elements are arranged such that there are at least two periods of periodic structure corresponding to an arrangement of the light modulation elements in an arbitrary direction in said light modulation region (fig. 10), and sizes of the light

modulation elements increases along an outer peripheral direction of said light modulation region (wherein the office interprets the outer concentric ring to be larger than the inner concentric rings).

Re claim 3, Leib et al. further teaches for example in fig. 10, said plurality of light modulation elements have areas such that the ratios of light powers incident on the respective light modulation elements fall within a predetermined range (col. 8, ln. 22-27).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leib et al. (5107351) in view of Takahara (JP 2-135425).

Re claim 4, Leib et al. teaches for example in fig. 10, a spatial light modulator (111) for use in hologram recording (wherein the office interprets "for use in hologram recording" to be intended use and it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate

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the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations) and having a light modulation region of a circular shape (111), comprising: light modulation elements arranged in areas which are obtained by concentrically dividing said light modulation region (col. 8, ln. 23).

But, Leib et al. fails to explicitly teach radially dividing said light modulation region.

However, Leib et al. teaches varying the arrangement of the light modulation element (col. 8, ln. 30-34).

Furthermore, within the same field of endeavor of electrodes with regards to liquid crystal, Takahara teaches for example in fig. 1, radially dividing (abstract; "sectoral shape") said light modulation region (1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Leib et al. with the electrode structure of Takahara in order to provide control to vary the spatial frequency passband to maximize the S/C ratio, as taught by Leib et al. (col. 7, ln. 60).

Re claim 5, Leib et al. further teaches for example in fig. 10, said light modulation elements are arranged such that there are at least two periods of periodic structure corresponding to an arrangement of the light modulation elements in an arbitrary direction in said light modulation region (fig. 10).

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Re claim 6, Leib et al. further teaches for example in fig. 10, said plurality of light modulation elements have areas such that the ratios of light powers incident on the respective light modulation elements fall within a predetermined range (col. 8, ln. 22-27).

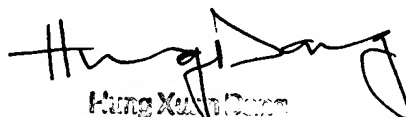
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph P. Martinez whose telephone number is 571-272-2335. The examiner can normally be reached on M-F 7:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JPM
7-26-06


Hung Xuan Dang
Primary Examiner